

REMARKS

Claims 1-41 are pending in this application. Claims 1, 8, 18, 26, 30, and 39 are independent claims. Claims 1, 4, 7, 26, 30 35, and 37-38 are amended. Claims 2-3, 27-28, 31-32, 34 and 36 are canceled. Claims 42 and 43 are new.

Applicant thanks the Examiner for allowance of claims 8-25.

Claim Objections

Claim 34 is objected to because of informalities. Applicant cancels 34, for reasons unrelated to the objection.

Rejections under 35 U.S.C. §102 – *Takahashi*

Claims 1-2, 5-6, 26-27, 30-35 and 39-41 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Publication No. 2004/0130958. This rejection is respectfully traversed.

Regarding independent claim 1, Applicant amends the claim to bring in the limitations of claim 3. The Examiner has indicated that claim 3 contains allowable subject matter. For this reason, Applicant believes independent claim 1 is patentable. For at least the same reason, Applicant also believes dependent claims 4-6 are also patentable.

Regarding independent claim 26, Applicant amends the claim to bring in the limitations of claims 27 and 28. The Examiner has indicated that claim 28 contains allowable subject

matter. For this reason, Applicant believes independent claim 26 is patentable. For at least the same reason, Applicant also believes dependent claims 29 and 40 are also patentable.

Regarding independent claim 30, Applicant amends the claim to bring in the limitations of claims 34 and 36. The Examiner has indicated that claim 36 contains allowable subject matter. For this reason, Applicant believes independent claim 30 is patentable. For at least the same reason, Applicant also believes dependent claims 33, 35 and 37-38 are also patentable.

Regarding independent claim 39, Applicant amends the claim to add a limitation requiring that “the period of oscillation signal is lengthened after a given time elapses from the initial change in the mode of operation of the device”. Based on this amendment, Applicant believes independent claim 39 to be patentable. For at least this same reason, Applicant believes dependent claim 41 is also patentable.

Applicant adds new claims 42 and 43. Claim 42 is a combination of original claim 1 and claim 2. Claim 43 is a combination of original claim 30 and 32.

The Examiner asserts that Takahashi comprises an oscillator circuit that generates an oscillation signal which varies based on mode of operation, a word line enabled circuit for generating a word line enabled signal, and a control circuit for controlling the oscillator circuit and word line enabled circuit so a pulse width of the word line enabled signal widens as operation mode changes from active mode to stand-by mode. The Examiner asserts that paragraph [0029] of Takahashi discloses a period of oscillation which is maintained as operation mode changes due to the widening of the pulse width.

Takahashi teaches a memory device that reduces current consumption caused by a self-refresh operation in stand-by mode (Abstract). Contrary to the Examiner's assertion, it appears that cited paragraph [0029] does not teach a period of oscillation that is maintained as the pulse width widens, while transitioning from active mode to stand-by. Paragraph [0029] appears to suggest that the time period used to change oscillating periods, while transitioning from stand-by to active, is longer than the time period used to change oscillating periods when the device transitions from stand-by to active. That is to say, the *delay* associated with the device changing from stand-by to active is longer than the *delay* associated with the device changing from active to stand-by. While paragraph [0029] is poorly written, such that the first sentence is a run-on sentence with poor logical clarity, it appears that paragraph [0029] does not teach a constant oscillating period with changing pulse width. Rather, paragraph [0029] teaches that the device delays the changing of both the pulse width and oscillation period, for a period, upon which time the pulse width and oscillation period then experience the mode of operation change, simultaneously.

For at least these reasons, Applicant believes new independent claims 42 and 43 are patentable.

Therefore, Applicants respectfully request that this rejection of claims 1-2, 5-6, 26-27, 30-35 and 39-41 under 35 U.S.C. §102 be withdrawn.

Allowable Subject Matter

Applicants note with appreciation the Examiner's indication that claims 3-4, 7, 28-29 and 36-38 contain allowable subject matter.

CONCLUSION

In view of the above remarks and amendments, Applicants respectfully submit that each of the rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

Pursuant to 37 C.F.R. §1.17 and 1.136(a), Applicant(s) hereby petition(s) for a one (1) month extension of time for filing a reply to the outstanding Office Action and submit the required \$120.00 extension fee herewith.

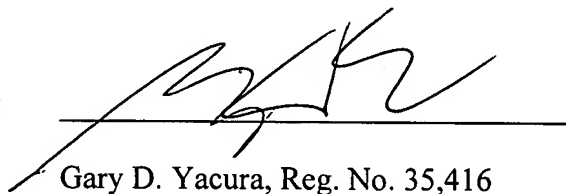
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John A. Castellano at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By


Gary D. Yacura, Reg. No. 35,416

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

GDY/CES:mat